MEETING HIGHLIGHTS
Hanford Site Technology Coordination Group
Management Council

March 18, 1998
EESB Snoqualmie Room
8:30 a.m. to 12:30 p.m.

PURPOSE

- To learn about the future direction of EM-50
- To review and discuss the Site-Specific Deployment Plan to prepare for a vote in April

AGENDA

INTRODUCTION/ANNOUNCEMENTS

UPDATES

- TFA Mid-Year Review Highlights (Terri Stewart, PNNL)
  The Tanks Focus Area (TFA) Midyear Review was held March 9-11. In general, the tasks received a very good report card for technical quality and strong ties to the users' needs. A final report on the review will be completed in April.

- DC Arc Melter (Jeff Surma, Integrated Environmental Technologies)
  Integrated Environmental Technologies (IET) was formed three years ago, evolving from EM-50's DC Arc Melter Program (FY92 - FY96), which implemented the plasma technology for DOE. IET is taking the technology further, working on a plasma-enhanced melter, which couples together the joule-heated melter and plasma technology. A unit has recently been sold to one of the Hanford privatization contractors to be used for mixed waste, and another unit is on order for low-level waste. This is a success story for EM-50 technology, and a press release is being prepared.

- Status of Salt Lake City Action Group Draft Report (Tom Anderson, FDH)
  They are in the process of putting together the draft report for review sometime in April.

- Canyon Disposition Initiative (CDI) (Jim Goodenough, DOE-RL and Jerry White, BHI)
  Funding for this initiative is currently $300K from the D&D Focus Area and $800K committed from the Robotics Crosscut program. EM-30, -40, -50, and -60 are working together to reach a Record of Decision (ROD) on what needs to be done.

EM-50 STRATEGIC POSITIONING (Steve Stein, PNNL)

The objective of this effort is to develop a strategic plan with a strong base of support that clearly defines the role and importance of science and technology in the context of the 2006 Plan and beyond. The plan has been drafted and provided to EM for comment. The plan defines the OST Mission as follows: to provide leveraged science and technology capabilities, services, and solutions directed at priority DOE-EM problems driven by user-defined needs in a partnership arrangement.

SITE-SPECIFIC DEPLOYMENT PLAN (Dave Biancosino, DOE-RL)

Hanford's activities in support of technology deployment and the relationship between the various activities were discussed. The plans are available on the Web. Technology tables will be updated during the first two weeks of April. The Site Specific Technology Deployment Plan is due to DOE/HQ on May 1. Please send comments on the draft management plan section to Dave Biancosino ASAP. RL has committed to deploy 11 technologies in FY 1998, and Technology Opportunity Fact Sheets are being prepared.

STCG IMPROVEMENTS -- BRAINSTORMING SESSION (Linda Fassbender)

Feedback was requested on how we can improve the content and format of the STCG Management Council meetings. Forms were handed out to mark preferences for meeting format and to prioritize future agenda items. Results will be reported next month.

MEETING REVIEW AND WRAP-UP

The next meeting will be on April 15, from 8:30 a.m. to 12:30 p.m., in the EESB Snoqualmie Room.

TOUR -- 200 Area TWRS Technologies

ACTION ITEMS

- Provide comments to Dave Biancosino on draft Hanford Technology Deployment Management Plan -- ASAP
- Work with Mary Ace to develop a press release on the plasma-enhanced melter

HANFORD SITE TECHNOLOGY COORDINATION GROUP
MANAGEMENT COUNCIL MEETING MINUTES

March 18, 1998
EESB Snoqualmie Room
8:30 a.m. - 12:30 p.m.

INTRODUCTION / ANNOUNCEMENTS

Lloyd Piper opened the meeting and introductions were made.

Safety Topic: Lloyd Piper mentioned that he drove out to the Site on Monday to visit PFP. The wind was blowing and tumbleweeds were rolling. A woman was driving another car, and a tumbleweed popped up into her vision. She made a quick maneuver to try to avoid the tumbleweed. Lloyd cautioned everyone that it's much better hit a tumbleweed than to swerve and possibly have your vehicle go out of control. Be careful and think about defensive driving. Dirk Dunning commented that he had a similar incident happen with a rabbit darting out in front of his vehicle. He swerved and nearly lost control.

CPI Topic: Tom Anderson reminded everyone to be sensitive to the cost of meetings. We have a fiscal responsibility to the taxpayer to manage them well. There's also an indirect cost involved to take the information back to each organization. Consider fewer or shorter meetings or fewer people attending.

Lloyd Piper provided information on FY 2000 budget developments. There have been meetings in Portland, Seattle, and Richland. The first submittal of the budget is April 21. We had assumed that we would receive level funding, but they gave us $1.5B, not including funding for the Laboratory. The HQ/OMB target was only $961M -- $44M less than our level funding assumption. The continuing struggle for compliance funding means that science and technology investment funds are extremely limited. Programs will have to incorporate science and technology into their baselines where it makes sense.

UPDATES

TFA Mid-Year Review Highlights (Terri Stewart, PNNL)

The Tanks Focus Area (TFA) Midyear Review was held March 9-11. This year the review focused on technical quality rather than funding decisions. Preliminary recommendations have been made. The TFA Panel evaluated the progress and identified technical and programmatic issues. The ASME Panel provided a peer review. Feedback from the reviewers had two key themes. 1) In general, the tasks received a very good report card for technical quality. 2) There was clearly a strong tie to the users' needs and the recommendation was that we continue to strengthen the user performer requirements.

Seventeen of the 24 TFA tasks were reviewed in detail. Seven tasks directly benefit Hanford, and five tasks indirectly benefit Hanford. The review process engages external, knowledgeable people that bring different perspectives. Comments from the panels will be received by March 31, and a final report will be done by April 30.

Questions/Comments:

Lloyd Piper commented that it sounds like the reviewers didn't find any disconnects. Terri said that the ASME peer review panel indicated that there was clearly a link between the user needs and technology solutions. Course corrections were identified and it was suggested that we make the information more widely available.

Wayne Martin asked if HTI was reviewed. Terri indicated that HTI was reviewed last year. This year, they focused on the cone penetrometer. They felt that this was a good technology that is tied to Site needs.

Cathy Louie mentioned that $1M has been cut out of the FY98 HTI budget, and the FY99 budget has a cut in support to some of these tasks.

Dave Biancosino said that other Focus Areas are in the process of planning their midyear reviews. We'll try to get updates on those when we can.

DC Arc Melter (Jeff Surma, Integrated Environmental Technologies)

Jeff Surma reported on the status of the dc arc melter technology. Integrated Environmental Technologies (IET) was formed three years ago as a result of Battelle's entrepreneurial leave program. The company has grown to 18 staff. It evolved from EM-50's DC Arc Melter Program (FY92 - FY96), where PNNL and MIT joined forces to implement plasma technology for DOE.

IET is working on the next generation system, which is the plasma-enhanced melter (PEM). This technology couples the joule-heated melter and the plasma technology. It is a net energy producer, making 400 kWh per ton of waste processed. An extremely high heating efficiency is achieved at relatively low cost. The new commercial-scale unit is capable of processing 17 tons of material a day, which is almost full scale for many customers (but not for municipal solid waste). A unit has been sold to one of the Hanford privatization contractors to be used for mixed waste. They have filed their permit already and will be using it in the year 2000. Another system has been ordered for low-level waste and will be delivered in June and used immediately. Other systems are on order for later delivery.

A number of patents were issued, and IET licensed the patents. Battelle and MIT were partners and own the patent for the monitoring technologies. IET has filed 10 additional patents for the plasma-enhanced melter, and 7 of them have been granted.

Questions/Comments:

Pam Brown suggested that this technology might be applicable for municipal solid waste (MSW), and asked if they have looked at municipal household materials. She also asked if the glass product is suitable for landfill. Jeff responded that it was suitable for MSW as the process uses steam reforming, not incineration. He also said that the glass will be shipped back to the Hanford site as LLW.

John Murphy asked if they have worked with the regulators to get it permitted. Jeff said that ATG has applied for the permit. They will be doing a large demonstration program with ATG later this year.

Tom Engel thought this technology looked very attractive and asked what sort of encouragement they had received from the Hanford contractors. Jeff indicated that the company would never have started without Battelle's entrepreneurial leave program and economic development funds. EM-50 provided significant funding over several years to develop the DC Arc Melter, and DOE allowed it to be privatized. There was no real encouragement from contractors on Site; the primary objective is to take the technology to the huge MSW industry.

It was noted that this is a real success story for EM-50 technology, and that HQ should take credit for this. Dave Biancosino suggested that our communications person write a press release for it.

Status of Salt Lake City Action Group Draft Report (Tom Anderson, FDH)

Tom Anderson gave a status on the SLC Action Group draft report, which is challenged to make science and technology a success at Hanford. Many STCG members have participated in this effort. The original plan was to draft a report to be available for final review in February. However, the job was much more time-consuming than they thought. Several events that have occurred at the management level need to be included in the report. For example, Under Secretary Moniz stated that PNNL must lead a stronger effort to improve the Site baseline. The ongoing EM-50 re-engineering effort must also be included. The report, which will be more like a strategic plan with goals, should be ready for review in a month or so.

Canyon Disposition Initiative (CDI) (Jim Goodenough, DOE-RL and Jerry White, BHI)

Jim Goodenough gave a short report from his meeting with EM-40 and EM-50 in Washington, D.C. last week. CDI funding from the D&D Focus Area is $300K this year and $200K next fiscal year; another $800K is committed from the Robotics Crosscut Program. The Program Plan is being finalized now; it includes plans for starting U-Plant characterization with robotics this year. A refined set of technology needs will be developed soon. A Record of Decision (ROD) is needed on what will be done with the canyon facilities.

Shannon Saget is the technical lead for CDI at RL, Kim Koegler is the BHI technical lead, and Bob Henckel is the project manager.

The tough part was getting all the players (EM-30, -40, -50, and -60) involved and working together. This is the first time that EM-50 has been involved this early in the project. They are committed to be a partner to work with EM-40 on the ROD.

Dirk asked when the structural analysis of the building will be done. Jerry said that it's part of the plan for this fiscal year. Dirk feels that it is a huge waste of money, since there's no way the facility will pass structural integrity. Jerry stated that there's no preconceived solution; they are trying to reach the right decision.

Barbara Harper has the same concerns as Dirk. The stakeholders need to be partners up front instead of just hearing presentations and being provided with information later. Jerry indicated that they have done that; they've sent out an initial feasibility assessment for public comment. If anyone want to be on the team, contact Jim Goodenough.

EM-50 STRATEGIC POSITIONING (Steve Stein, PNNL)

Gerald Boyd is responsible for this EM Science and Technology (S&T) strategic planning activity. Steve Stein of the Strategic Laboratory Council (SLC) and Ed Berkey of the Environmental Management Advisory Board (EMAB) are leading the effort.

The current focus of OST is to fund R&D from directed basic research (EMSP) through technology demonstration. Recently, the emphasis has been on deployment. There has been some major criticism of the program in the past, such as:

- Over $2.5B has been spent with nominal return
- Roughly 500 technologies have been invested in, and the perception is that they are sitting on the shelf
- A substantial portion of the EM-50 budget is politically driven (~50%)

The objective of this effort is to develop a Strategic Plan with a strong base of support (both inside and outside DOE) that clearly defines the role and importance of S&T in the context of the 2006 Plan and beyond. Some key questions to be answered are:

- Is there a need for science and/or technology to support the EM mission?
- What benefits should be expected from science and/or technology deployment?
- Where is science and/or technology needed most, and where is it needed least?
- How do we establish a customer/supplier relationship that will yield tangible payoffs?
- How should success and failure be measured?

The approach is to focus first on the WHAT, and then on the HOW. We need to get strong line program involvement, develop support inside EM, and then expand external involvement.

Current Status:

- Held individual interviews with senior-level managers from line programs at most sites
- Held meeting on January 29 with senior-level managers from line programs (Hanford, SRS, Oak Ridge, INEEL)
- Drafted an initial Strategic Plan and provided it to EM for comment
- Meeting held on February 20 with senior-level managers from DOE-HQ, Field Offices, EPA, and NSF
- Revised draft Strategic Plan based on comments received at the February 20 meeting.

Vision: The risk, cost, and schedule for completion of the EM mission will be substantially reduced through application of S&T as part of an integrated approach to solve DOE-EM problems.

Mission: Provide leveraged S&T capabilities, services, and solutions directed at priority DOE-EM problems driven by user-defined needs in a partnership arrangement.

Users came out aggressively in support of basic science, funded with a separate budget.

Questions/Comments:

Cathy Louie commented that Congress is still measuring EM-50 by the number of technologies developed and deployed. She asked how this information is going forward to Congress, and if we can propose some better measure of success. Steve said that the issue of measurement will be discussed at an EMAB meeting next week. A plan is being developed for Congressional interface. The solution is to send the people who own the projects with Gerald Boyd to tell Congress that they need these technologies.

Wayne Martin mentioned that among HAB members, the feeling is that Congress is moving away from funding DOE cleanup work. EM-50 strategic positioning will fail if the overall EM strategy fails.

Don Wodrich suggested that they make the program user responsible for the technology money (i.e., a certain percentage of their budget would have to be spent on improvements to the baseline). Steve said that they haven't gotten to implementation yet. We don't necessarily need the EM-50 Program, but we need to protect the technology budget. Jeff Frey said that TFA is reverting to this model in FY99, limiting their involvement to national integration issues.

Tom Engel commented that, from the university perspective, EM-50 has not been viewed as a very innovative organization. They don't press the baseline with new approaches. The measure should be deployment, not demonstrations. Programs should do some of the short-term technology development, and EM-50 should focus on longer-term innovative solutions.

Jerry White felt that this effort is right on target and is needed, but the group can't deal with the whole EM problem. They need to work on re-orienting EM-50. One of the problems we've seen in the past is that EM-50 develops the technology, turns to the line program and says "take it," and then the user needs to get it ready to implement. EM-50 should develop the technology and get it ready to implement.

SITE-SPECIFIC DEPLOYMENT PLAN (Dave Biancosino, DOE-RL)

Dave Biancosino discussed Hanford's activities in support of technology deployment and explained how they are related. Technology tables in the 2006 Plan (Accelerating Cleanup: Paths to Closure) include: 1) technology activities to be deployed, 2) technology activities linked to S&T needs, and 3) technology deployment cost savings data. RL/AMT coordinates the development of these tables for the RL projects, with review and input by the contractors' technology deployment contacts. Updates on the tables will take place during the first two weeks of April. Cost savings will be refined based on an "EM cost savings methodology" currently being developed. Margo Voogd, Shannon Saget, and Kathy Andrews-Smith are the Hanford points of contact.

A Site Specific Technology Deployment Plan is required by the 2006 Plan guidance, and is due to HQ on May 1, 1998. It is a two-part plan, consisting of a Management Plan and multiple Technology Opportunity Fact Sheets. Dave needs written comments ASAP on the

draft Management Plan that was distributed. He will send a revised version out again before the next Management Council meeting. The Technology Opportunity Fact Sheets are still being prepared. RL has committed to deploy 11 technologies in FY 1998, but wants to track approximately 20.

Waste Disposition Maps are another part of the 2006 Plan. These maps define the volumes of waste and materials that require disposition, the process for disposition, and movement of waste and material onsite and offsite. Lots of information on waste streams around the Complex is available on the Web.

Tom Engel suggested that the Hanford Technology Deployment Management Plan be more detailed in terms of the specific actions that are planned. Jerry White responded that he thought Tom Anderson's SLC Action Group report would provide the details that Tom wanted, however it isn't finished yet.

STCG IMPROVEMENTS -- BRAINSTORMING SESSION (Linda Fassbender)

The Facilitation Team asked the Management Council members how the content and format of these meetings can be improved and requested feedback on the tours. Forms were distributed to mark preferences on potential meeting formats and to prioritize future agenda items. Members proposed the following new agenda items and format suggestions:

New agenda items:

- Compliance costs of not having technologies (EPA & Ecology) -- Barbara Harper
- Pacific Rim Enterprise Center activities -- Roger Collis
- Panel of contractor project managers to get their views on barriers to technology deployment -- Jim Goodenough
- EMAB updates regarding technology issues (e.g., the CLN is gone; who is doing that role now?) -- Barbara Harper
- EM Strategy implementation at Hanford -- Bob Rosselli
- Review of cost savings, schedule reduction from EM-50 proposals (do the proposals going out really have substantial cost savings?) -- Tom Engel
- ITRC Update from Nancy Uziemblo -- Roger Collis
- Verification program update from Nancy Uziemblo -- Gary Ballew
- Ecosystem/habitat restoration -- Dirk Dunning
- NRTC Updates -- Barbara Harper
- Integrated Vadose Zone Plan -- Wayne Martin
- Columbia River impacts assessment -- Dirk Dunning

Format suggestions:

- Must get projects more engaged in meetings; come talk about their baselines, endstates, and how technology comes to play (near-term and long-term)
- Panel of line managers
- Panel of contractor project managers to get a view of the barriers to technology deployment that they face

The forms were collected, and results will be reported next month.

MEETING REVIEW AND WRAP-UP

The next meeting will be held on April 15, 1998, in the EESB Snoqualmie Room.

ACTION ITEMS

- Provide comments to Dave Biancosino on the draft Hanford Technology Deployment Management Plan -- ASAP
- Work with Mary Ace to develop a press release on the plasma-enhanced melter